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EXAMINER

BALDWIN, GORDON

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



***Detailed Action***

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Luthra (U.S. Pat. No. 4,933,309).**

**Consider claims 1, 3 and 7-10,** Lurtha discloses a ceramic composite which is taught to contain ceramic fibers of alumina as well as a ceramic powder of alumina with a particle size of 1-6 microns. (Col. 2 lines 20-28, 58-69 and Col. 3 lines 1-19)

The disclosure of a particle size of 1-6 microns is considered to anticipate the “about 5 micrometer particle size” because prior art which teaches a range within, overlapping, or touching the claimed range anticipates if the prior art range discloses the claimed range with sufficient specificity. See MPEP 2131.03 and Ex parte Lee, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993).

Lurtha is considered to disclose a composite structure in a fired state. (Col. 3 lines 10-20 and 40-55) Additionally, Lurtha discloses the use of tape-casting to produce the ceramic piece with the binder and sintering aid evaporated off, with a fired porosity of 60% or less (see col. 3, lines 53-55, for instance).

The claiming of the method of “tape-casting” is considered to be a product-by-process limitation and even though product-by-process claims are limited by and

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defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process., (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious different between the claimed product and the prior art product (*In re Marosi*, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113).

Regarding the use of Lurtha's article as compared to the applicant's stated use in the preamble of claim 1, the recitation "seal for use in a high temperature fuel cell" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Lurtha discloses that the article described is for use in high temperature environments, therefore such an article is also considered to be in the realm of use for a seal or any other article used in a high temperature environment.

Additionally, regarding the ability of the Lurtha's article to have the same characteristics as the claimed article (ceramic fibers remaining flexible at operating temperatures and ceramic fibers resisting sintering at operational temperature), these characteristics are considered to be met by Lurtha. They are met because Lurtha teaches the use of the same materials (alumina fiber and powders) and the same process to manufacture (tape-casting) with the same size particles with porosity in the range of the applicant. By this disclosure, the features of flexible ceramic fibers at operating temperatures and fibers resisting sintering at operating temperatures is considered to be met by the disclosure in the Lurtha reference.

**Consider claims 4-6**, while Lurtha does not specifically mention a pre-fired porosity, these claims are considered to be met by Lurtha. They are met because Lurtha teaches the use of the same materials (alumina fiber and powders) and the same process to manufacture (tape-casting) with the same size particles with porosity in the range of the applicant. Additionally, since claim 1 relates to a seal in a "fired state", the limitations of claims 4 and 5 are merely to an intermediate phase of the final "fired" product. Therefore these limitations are not of the final product (product of claim 1) and are not given patentable weight over the prior art.

### ***Response to Arguments***

The 35 USC 112(2) rejections have been withdrawn due to the applicant's amendments.

Applicant's arguments against the 35 USC 102(b) rejection filed 9/26/2008 have been fully considered but they are not persuasive. The applicant discloses in the Pg Publication 2004/0135324, that the term "fired" refers to the *ceramic material after it has been heated above a temperature where a substantial proportion of organic material within the ceramic material is burned out.* (Para. 23). In light of this description of the term "firing", the Lurtha reference discloses that shaping-aid materials (organic material) are preferably of the type *which evaporate away upon heating to around 400 degrees Celsius.* (Col. 3 lines 45-55 in Lurtha) Under the claim language of claim 1 and in light of the applicant's specification, the compact disclosed in col. 3 lines 45-55 of Lurtha is considered to be fired and substantially free of binder with a porosity of less than 60%, as presently claimed. Therefore, the art disclosed by Lurtha is still considered to read upon the claim limitations recited by the applicant.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GORDON R. BALDWIN whose telephone number is (571)272-5166. The examiner can normally be reached on M-F 7:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GRB

/Timothy M. Speer/  
Primary Examiner, Art Unit 1794